

ON NEW SPECIES OF *POLYPLACOPHORA* FROM
SOUTH AUSTRALIA.

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PLATE IX.

CHITON AUREOMACULATA, n.sp. Pl. IX, Figs. 3-3f.

Shell elongately oval, carinate, side slope but very slightly arched. Central area apparently smooth, but minutely reticulated under the microscope, and showing no jugal track. Towards the base of the area, on each side, are three sulci which are continuous throughout the length of the shell, between the laterals, and but slightly indicated on the terminal valves. Colour creamy white, irregularly besprinkled with golden spots, varying in size and shape. Girdle inconspicuously tinged with green.

Intermediate valves scarcely beaked; of even width, with the exception of the first, which is nearly double that of the others. Posterior margin smooth. Lateral areas narrow, with the diagonal indifferently raised, and ornamented with two rows of pustules which gradually increase in size as the margin is approached; pustules distributed, one row on the diagonal, the other on the posterior margin, intervening space smooth. The anterior valve has a row of 8 pustules round the girdle margin, and three on each side of its posterior margin. The posterior valve has also a row of pustules similarly placed to those on the anterior, as well as three pustules on each end of a raised line, which traverses the valve at right angles across the mucro. Mucro central and well defined; posterior slope excavated. Interior very pale blue. Sinus wide and shallow. Anterior valve with 8 slits, median 1-1, posterior 10. Girdle scales smooth and convex. Length 12, breadth 3.5 mm.

Hab.—Marion Reef, Troubridge Island, on a small stone.

ISCHNOCHITON RESPLENDENS, n.sp. Pl. IX, Figs. 4-4f.

Shell elongately oval, elevated, scarcely carinated, very minutely but regularly punctured throughout, more indistinctly so on the lateral areas and anterior valve. Central valves slightly beaked; anterior valve larger than the others, and posterior valve with the umbo anterior to the centre. Jugal tract creamy white, radiated with ashen, assuming the appearance of ivory; pleural tracts a rich golden brown, on which are limned bright blue lines, the lines sometimes broken into irregularly shaped markings. Lateral areas but slightly raised, nevertheless distinct, apparently smooth, but pitted like the remainder of the shell when seen through the microscope. They are of the same ivory tint, and painted with ashen streaks like the jugal

tract. Girdle creamy white, clouded at regular intervals with dark brown. Scales large, regular in disposition, rounded, and smooth. Anterior valve with 9 slits, central valves 1-1, and posterior valve 11. Length 25, breadth 15 mm.

Hab.—St. Vincent and Spencer's Gulfs.

This species is a close ally to the South Australian form of *I. smaragdinus*, Angas, but is appreciably different. It attains a larger size, and is remarkable for a very distinct and brilliant pattern of coloration, more particularly when viewed alive in its natural element.

[This species was discovered by Mr. Matthews, who has taken all the specimens yet found in our waters; but I have seen an example which was obtained in the adjoining colony of Victoria.—W. T. B.]

ONITHOCHITON ASHBYI, n.sp. Pl. IX, Figs. 2-2e.

Shell oblong, much elevated, valves rounded dorsally, side slopes rapidly descending. Central area smooth, cream-coloured, with spots and blotches of blood colour, more especially on the jugal tract. Intermediate valves beaked. Lateral areas ornamented with a double row of warty nodules of variable size, which, in some cases, coalesce. A single row on the edge of the posterior margin. Anterior valve with numerous little warty excrescences irregularly but not closely disposed over its whole surface. Posterior valve one-half the width of the other valves, which are of even width throughout. No slits visible. Girdle felty, but under the lens covered with minute scales, irregular in size and shape, like grains of sand. Sinus wide and deep for a shell of this size. Length 8.5, diam. 4.5 mm.

Hab.—South Australia.

The figures of this species were not drawn by Mr. Thomas, and are not very successful.

LEPIDOPLEURUS MATTHEWSIANUS, Bednall, n.sp. Pl. IX, Figs. 1-1f.

Shell elongate, regularly arched; keel and lateral areas indistinct, but clearly defined when seen through the lens; jugal area absent; lateral slopes rounded. Colour grayish white. Anterior valve closely, minutely, regularly, radiately granulated throughout. Central valves similarly ornamented, the granulations running longitudinally on the dorsal area, and radially on the lateral areas, the granulations by their direction defining the areas. Sutural plates small, triangular, and very distant, the jugal sinus consequently being exceedingly wide; posterior dorsal margin straight. Posterior valve as the others, and with prominent central obtuse elevated apex, the slope to the margin being slightly concave. (Bednall.) Length 9, breadth 3.5 mm.

Hab.—St. Vincent Gulf.